sustainable savings

Measurement, Metering & Display via e•communicants

legrand®

Measurement, Metering & Display via e•communicants

WEB SERVER 32 Cat.No 261 78

User manual

(for Smartphone)

version 1.1

N0034A01PC-11W16

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1. LICENSE AGREEMENTS

LICENSE AGREEMENT

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License agreement: complete file available on the CD-Rom

2. SYSTEM REQUIREMENTS

- **Display possible on:** (Device, Operating system, Web Browser)

  - iPhone (3GS, 4 et 4S), iOS 5, Safari
  - iPhone (3G), iOS 4, Safari

  - iPod Touch (3 et 4), iOS 5, Safari
  - iPod Touch (2), iOS 4, Safari

3. COMPATIBLE DEVICES*

- **“Web Server 32”**
  - Management up to 32 devices

- **Version 1.4.0**
  - Range **EMDX³**
    - Multifunction measuring devices:
      - Modular - Cat.No **046 76**
      - Access - Cat.No **146 68**
      - Premium - Cat.No **146 69**

* Measuring / metering devices

3. COMPATIBLE DEVICES*

- Range **EMDX³**
  - energy counters RS485 :
    - Single-phase direct connection – Cat.Nos **046 77** (standard), **046 79** (MID)
    - Three-phase direct connection – Cat.Nos **046 80** (standard), **046 83** (MID)
    - Three-phase connection with CT– Cat.Nos **046 84** (standard), **046 86** (MID)
  - energy counters pulse output (with the Concentrator Cat.No **046 87**):
    - Single-phase direct connection – Cat.Nos **046 70-81-72** (standard), **046 78** (MID)
    - Three-phase direct connection – Cat.Nos **046 73** (standard), **046 82** (MID)
    - Three-phase connection with CT– Cat.Nos **046 74** (standard), **046 85** (MID)

* Measuring / metering devices

3. COMPATIBLE DEVICES*

- Range **DPX³**
  - **DPX³ 250 electronic** only versions with **integrated measurement unit**
    - via the communication module Cat.No **4 210 75**
- Range **DMX³** with protection unit – touchscreen (Cat.No **0 288 03/04**)
  - via the communication module Cat.No **0 288 05**

* Measuring / metering devices

3. OTHERS COMPATIBLE DEVICES**

- Range **DPX³**
  - **DPX³ 160 thermal-magnetic with integrated RCD**
  - **DPX³ 250 electronic, electronic with integrated RCD** et **thermal-magnetic with integrated RCD**
    - via the communication module Cat.No **4 210 75**
- Range **DMX³** with protection unit – LCD screen (Cat.No **0 288 00/01/02**)
    - via the communication module Cat.No **0 288 05**

** Devices without measuring / counting data

4. LANGUAGES AVAILABLE

- **Languages:**
  - Belgian Dutch
  - Belgian French
  - Dutch
  - English
  - French
  - Italian

5. IMPPLEMENTATION - Settings

- Settings / configurations of the electrical installation
  - Procedure to configure the different measuring devices on the web server

- Materials required
  - Web Server Cat.No 261 78 user manual
  - A computer with a web browser (IE8+, Firefox, etc.)

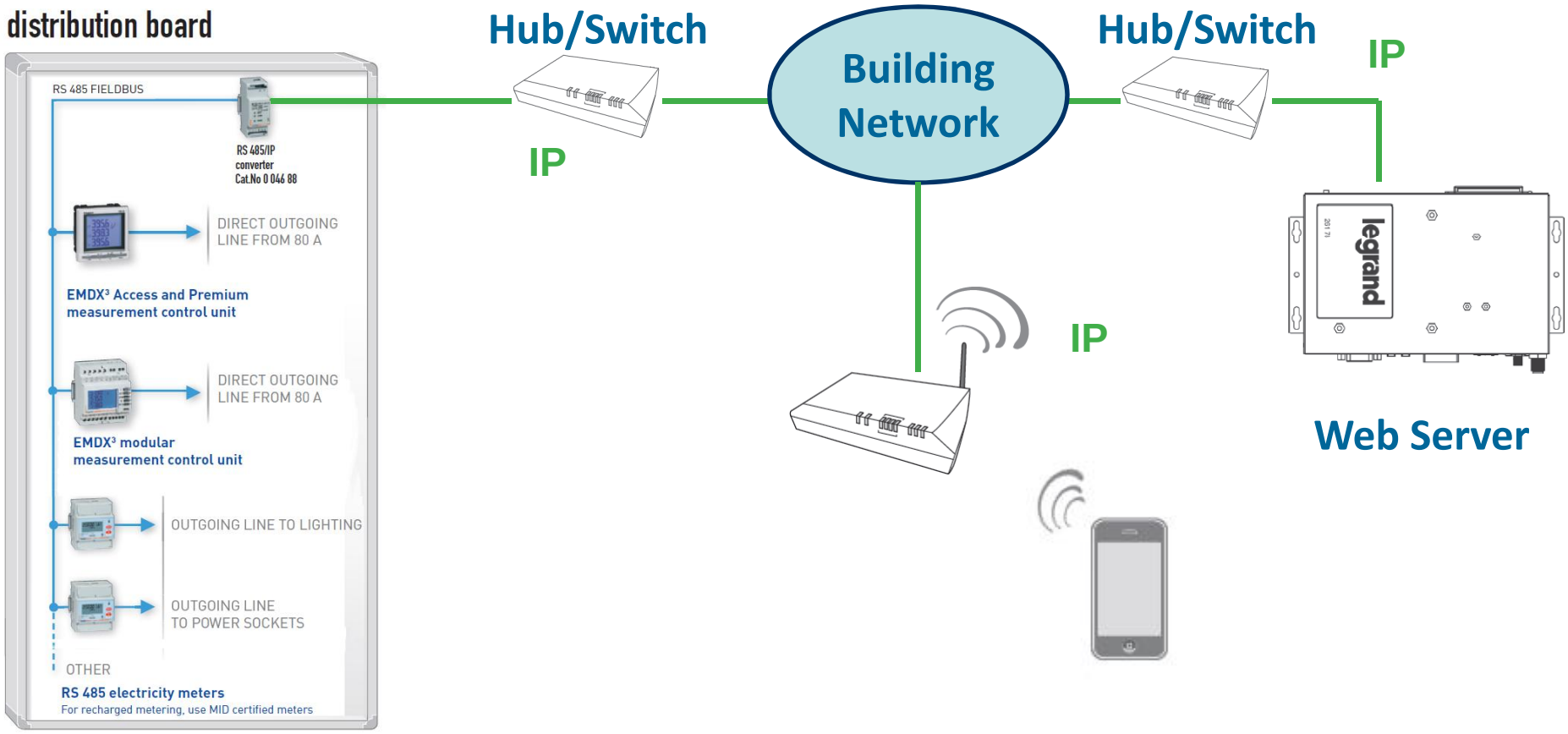
- Useful Information
  - Network and RS485 bus parameters for Gateways and Measuring devices (use the **parameters Table of the Web Server 32** contained on the CD Rom)

SETTINGS: Web Server Configuration

- **The procedure for configuring the Web server is only possible by accessing the Web server by a computer** (refer to the version “PC+Tablet" of the manual).

Measurement, Metering & Display via e•communicants

SETTINGS – Connection scheme



SETTINGS: System Configuration

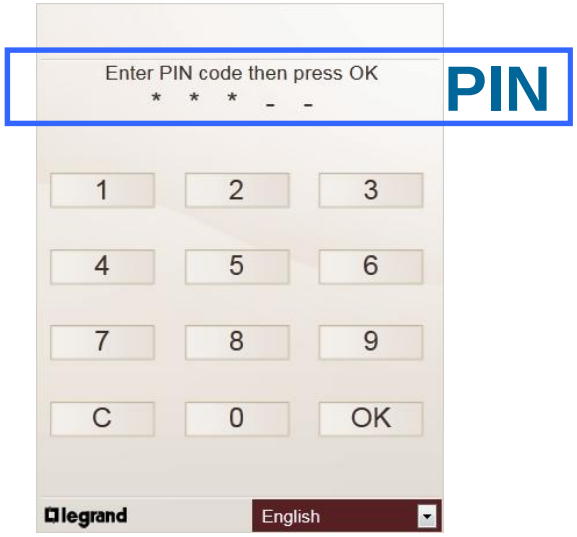
- How to Configure the electric installation (system)
  Follow the instructions on the next pages

- Configuration sequence
  1. **Gateways and Devices configuration**
  2. **Loads, Groups and Panel boards configuration**
  3. **Bill of Energy configuration**

SETTINGS: System Configuration

- Connect to the Web Server by typing in the web browser the IP address configured (**10.31.100.12** in the example).

- The login page appears, enter the PIN code: 99999 (default PIN code) and click OK

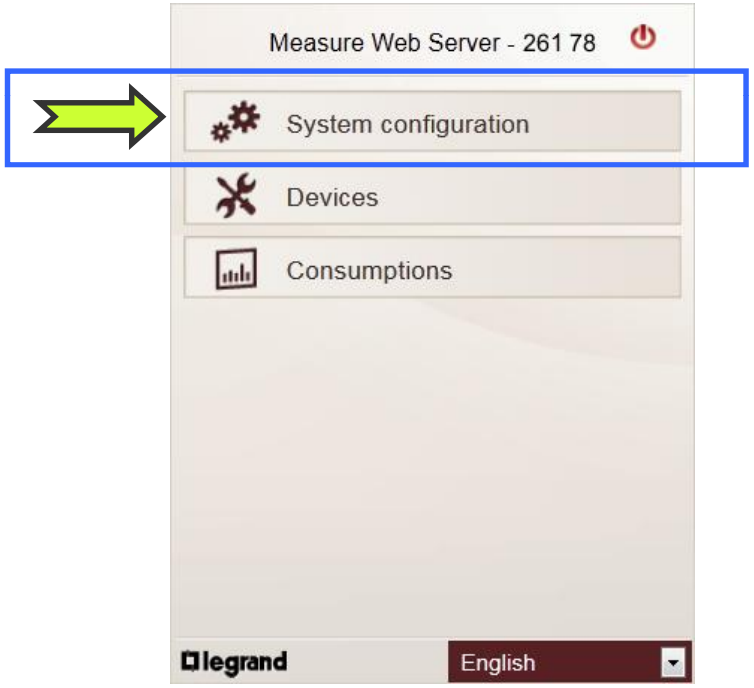


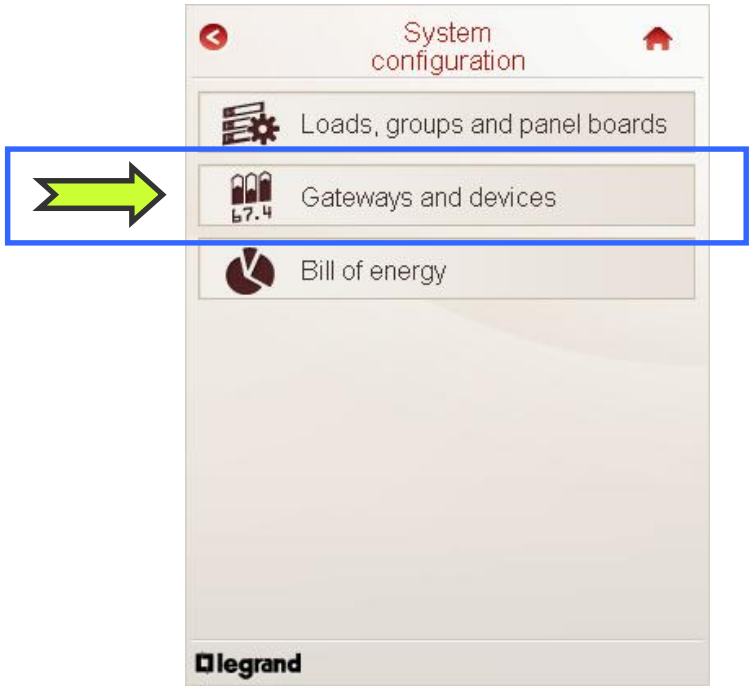
SETTINGS: System Configuration

- Enter, if necessary, the PUK code: 00000 9999 00000 (default PUK code) and click OK

SETTINGS – 1. Gateways and Devices

- **Configuration required**
  1. Click on "System Configuration"
  2. Click on "Gateways and devices"

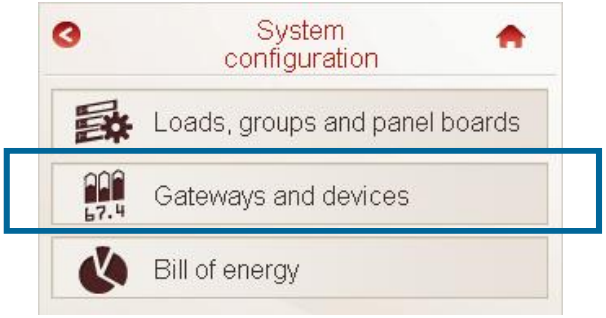




SETTINGS – 1. Gateways and Devices

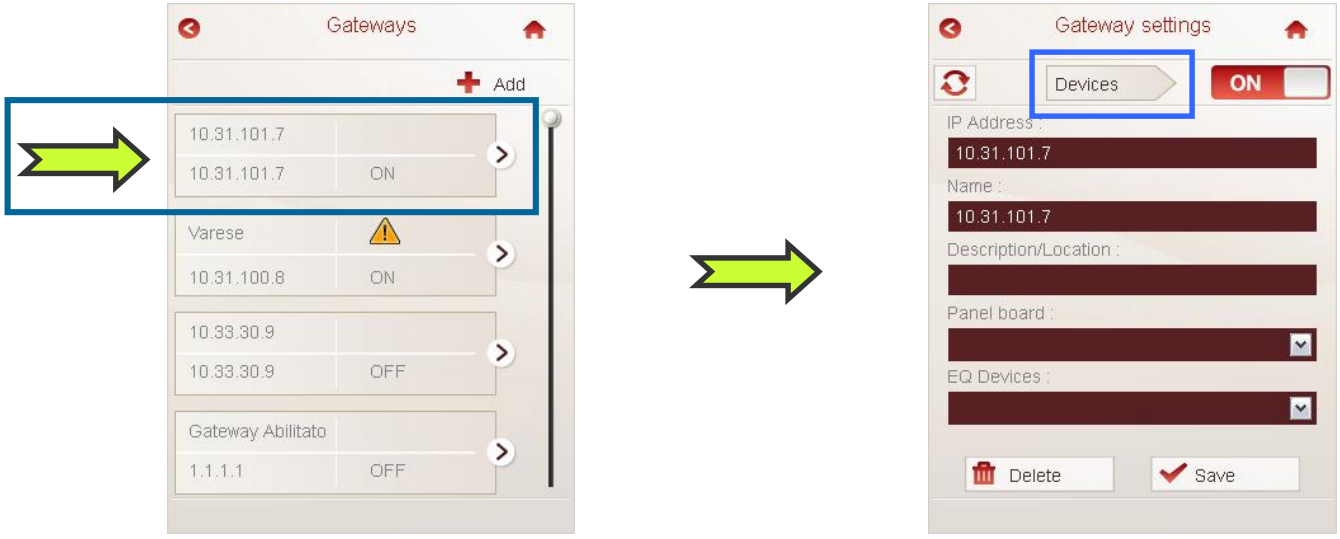
- **Architecture pages of the Web server**

  - **Gateways:** only one configuration page for the gateway(s).
  - **Devices:** one page to configure the devices of each gateway (a gateway bring together one or more devices connected to the RS485 bus)



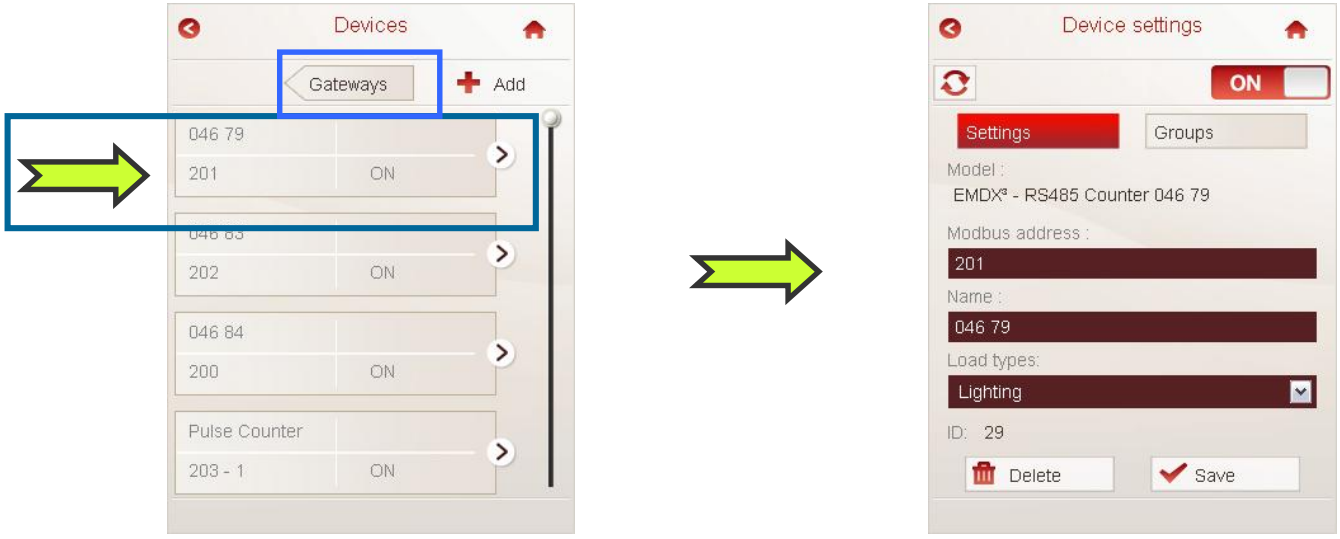
SETTINGS – 1. Gateways and Devices

- **Description of the Gateway page**: structure and navigation
  - **1st page**: complete list of the Gateways added (all the Gateways of the installation).
  - By selecting a Gateway leads to the **2nd page**: parameters of the selected Gateway.
  - **In the upper center**: button to jump at the page of the **Devices** connected to the selected Gateway



SETTINGS – 1. Gateways and Devices

- **Description of the Devices page:** structure et navigation
  - **1st page**: complete list of the Devices added (all Devices connected to the selected Gateway).
  - **In the upper center**: button to return to the **Gateways** page
  - By selecting a Device leads to the **2nd page**: parameters of the selected Device



SETTINGS – 1. Gateways and Devices

- **Creating and Saving Gateways**

  How to create a **Gateway**

  1. Click on the button

  2. Assign an **IP address*** and a **Name**** **(required parameters)**

  3. Click on the button

  4. Click on the button to verify the correct operation of the communication between the Web Server and the Gateway
  5. Click on the button

to configure the Devices connected to the Gateway

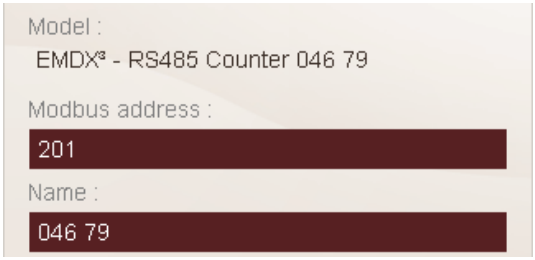
SETTINGS – 1. Gateways and Devices

- **Creating and Saving Devices**

  Procedure for **Measure devices with RS485 output**

  1. Click on the button

  2. Choose the **Model***,** assign a **Modbus address*** and the **Name**** **(required parameters)**



  3. Click on the button

  4. Click on the button to verify the correct operation of the communication
  5. Repeat the operations **1.⇨ 2. ⇨ 3**. to add more devices
  6. Click on the button

 to end

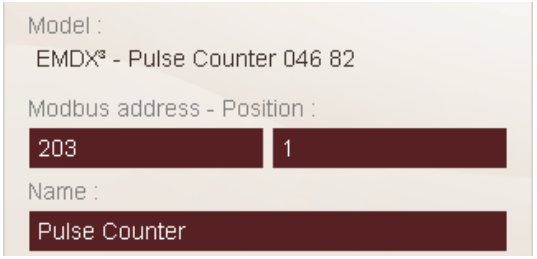
SETTINGS – 1. Gateways and Devices

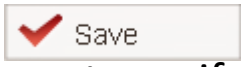
- **Creating and Saving Devices**

  Procedure for **Measure devices with pulse output** (details on next page)

  1. Click on the button

  2. Choose the **Model**
  3. Assign a **Modbus Address***, the **Position*** and the **Name*** **(required parameters)**



  4. Click on the button 

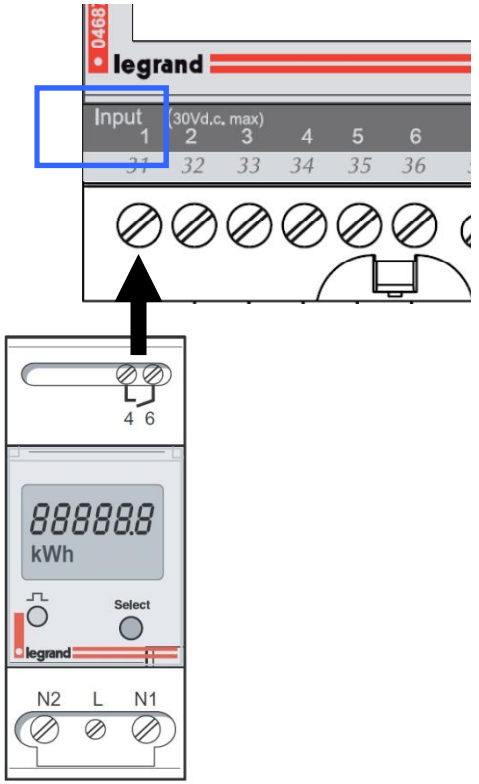
  5. Click on the button to verify the correct operation of the communication
  6. Repeat the operations **1.⇨ 2. ⇨ 3**. to add more devices
  7. Click on the button

 to end

SETTINGS – 1. Gateways and Devices

Details for **Pulse output Meters**:

- **Position:** is the input of the Concentrator (Cat.No **046 87**) on which the counter is connected



- **Verification by the button**

  Click on the button to check the proper functioning of the communication, as well as the input assignment of the Concentrator shown in the "Position"

SETTINGS – 1. Gateways and Devices

- **Creating and Saving Devices**

  Procedure for Circuit-breakers **DPX³ and DMX³**

  1. Click on the button

  2. Choose the **Model***,** assign a **Modbus Address*,** a **Name**** **(required parameters)** and the **Supply direction** of the Circuit-breaker (details on the next page)

  3. Click on the button

  4. Click on the button

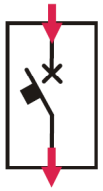
 to verify the correct operation of the communication
  5. Repeat the operations **1.⇨ 2. ⇨ 3**. to add more devices
  6. Click on the button

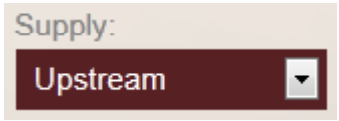
 to end

SETTINGS – 1. Gateways and Devices

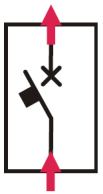
Details for Circuit-breakers DPX³ and DMX³

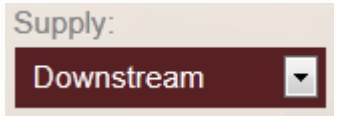
- **Supply:** to ensure correct measurement of various electrical quantities, it is necessary to indicate the Supply direction of the circuit-breakers:
  - circuit-breaker supply from the top → choose Upstream (**Default setting**)





  - circuit-breaker supply from the bottom → choose Downstream





Note: to modify this setting it is necessary to delete and recreate the device.

SETTINGS – 1. Gateways and Devices

- **Description of System Functions: ON/OFF button**

  - Allows to enable/disable a Gateway or Device
  - Available for Gateways and Devices

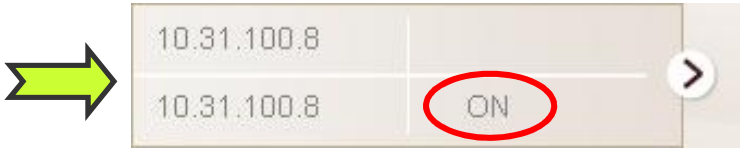
    The deactivation of a Gateway causes the deactivation of all devices connected to it.

SETTINGS – 1. Gateways and Devices

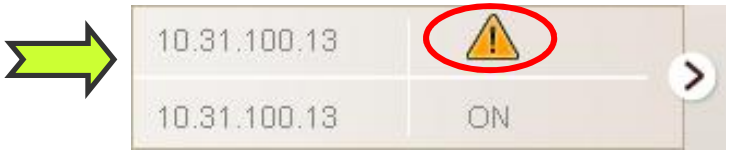
- **Description of the operating indications**
  - Page **System configuration**, for Gateways and Devices
  - Page **Devices**

  - ON/OFF button =

    - Correct operation



    - Communication problem



  - ON/OFF button =

SETTINGS – 1. Gateways and Devices

- **Description of System Functions: Display**

  – Page **Consumption** ⇨ **Grand Total / Partial / Details**

  – ON/OFF Button =

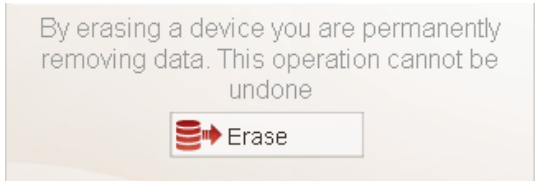
⇨ **Data non recorded**

SETTINGS – 1. Gateways and Devices

- **Description of System Functions:** "Delete" button

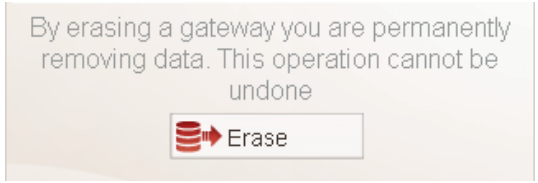
  - Page **System configuration**, for Gateways and Devices
  - Page Devices,

allows to delete a Device



  - Page Gateway,

allow to delete a Gateway
    - **NOTE:** To erase a Gateway, is necessary initially delete all the devices connected to it!

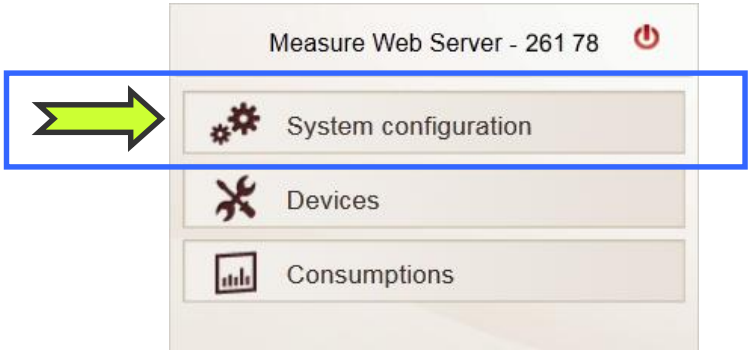


SETTINGS – 1. Gateways and Devices

- **List of the Required parameters:**
  - * Highly required parameters – **Address/Position:**
    - IP Address, a different IP address for each gateway
    - Modbus Address, a different Modbus address for each device connected to the same bus RS485
    - Positions, different for wiring reasons
      - only for Counters with pulse output
  - ** Essential parameter – **Name**:
    - Impossible to use several times the same name
    - If forgotten during the settings ⇨the Web server will assign a default value (IP Address for Gateway, Modbus Address for Devices RS485, Modbus Address - Position for Devices with pulse output)
  - *** Useful parameter – **Model**:
    - Possibility to have one, two or several identical models
    - If forgotten during the settings ⇨ shown the message **"Configuration Error"**

SETTINGS – 2. Loads, groups and panel boards

- Optional setup, used to give a description of the electrical installation by panel board(s), load(s) and group(s)
  1. Click on **“System configuration”**
  2. Click on **“Loads, groups and panels boards”**



SETTINGS – 2. Loads, groups and panel boards

- **Crating Panel boards**

  for a physical distribution of the different panel boards of the installation

  ⇨Recommended architecture: <u>only one</u> Gateway per Panel board

  Click on **"Panel boards"**

SETTINGS – 2. Loads, groups and panel boards

- **Creating Loads**

  are available:

  – 6 “pre-defined” categories (heating, air conditioning, etc.)
  ⇨ according by the Thermal Regulations 2012 (RT 2012)

  – Category **“Others”** to display the measurement without Load assigned

  – 8 additional categories, user-creatable

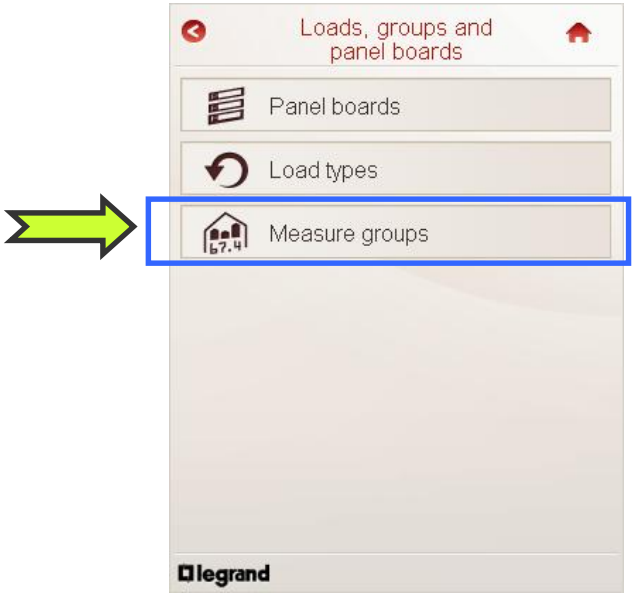
Maximum of 14 loads

SETTINGS – 2. Loads, groups and panel boards

- **Creating Groups**

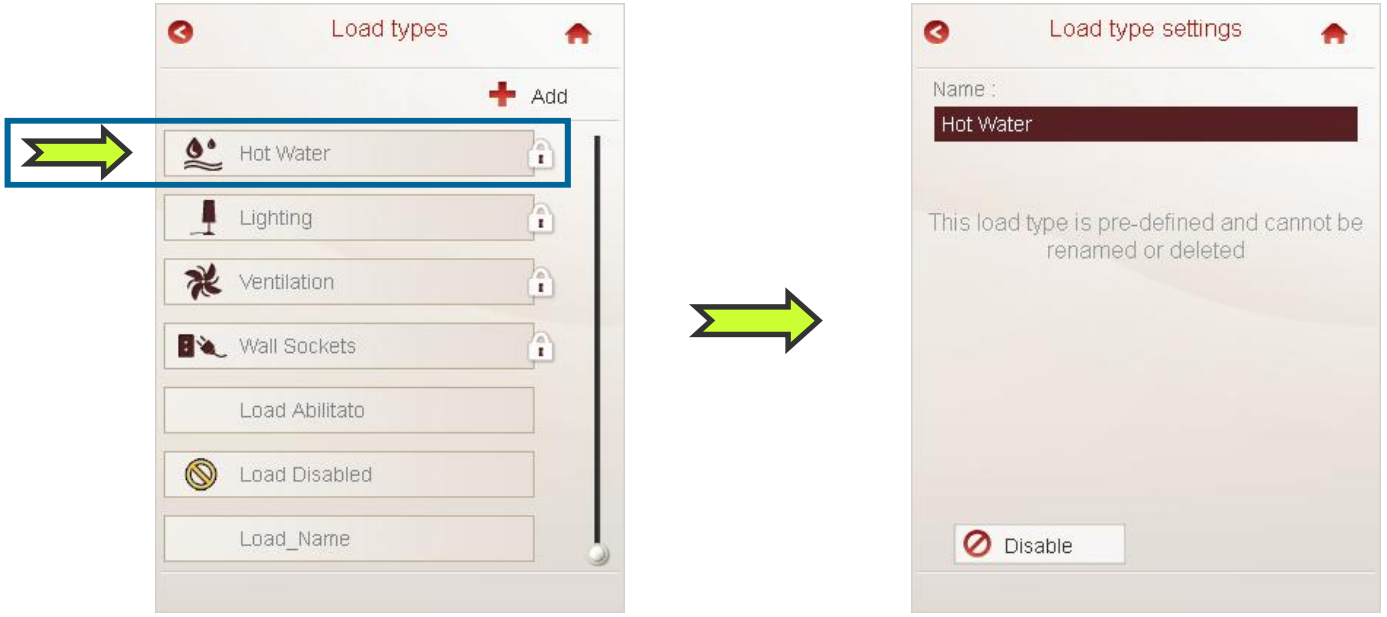
  for a logical distribution of the measuring points of the installation

  – Each device may be associated with several groups <u>simultaneously</u> (maximum 5).



SETTINGS – 2. Loads, groups and panel boards

- **Description of Pages Loads/Groups/Panel boards**
  - **1st page**: complete list of Loads, Groups or Panel boards.
  - By selecting a Load, Group or Panel Board leads to the **2nd page**: parameters of the selected Load, Group or Panel Board

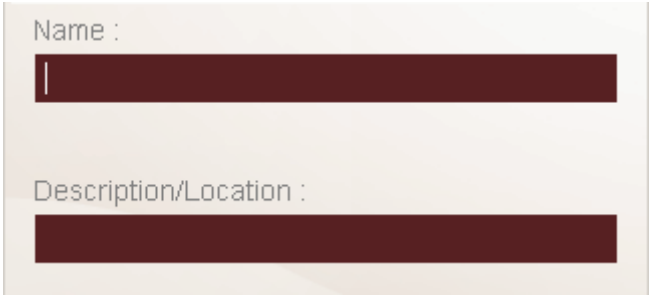


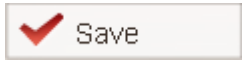
SETTINGS – 2. Loads, groups and panel boards

- **Creating and saving Loads, groups and panel boards**

1. Click on "**Panel boards, Load types or Measure groups**"
2. Click on the button

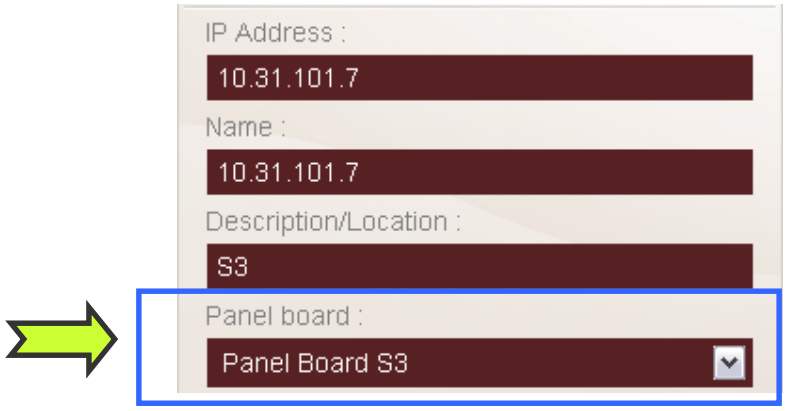
3. Enter the **Name** and the **Description/Location** (Description and location only for Panel boards and Measure groups)



4. Click on the button 

SETTINGS – 2. Loads, groups and panel boards

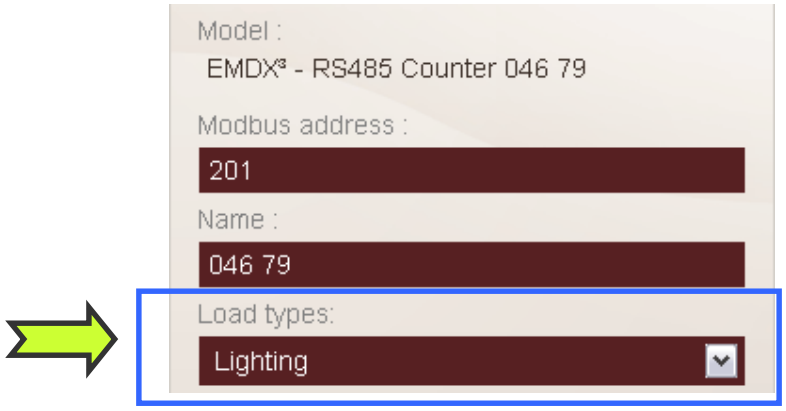
- **Assignment of Panel boards**
  1. Return to the section **"Gateways e Devices"** in **"System configuration"**
  2. In the **Gateways** page, is possible to assign each gateway (previously created) to a Panel board (a gateway can be assigned to only one panel board)



  – Click on the button

SETTINGS – 2. Loads, groups and panel boards

- **Assignment of Loads**
  1. Return to the section **"Gateways e Devices"** in **"System configuration"**
  2. In the **Devices** page ⇨ button Settings
     is possible to assign the **Loads** to each Device previously created

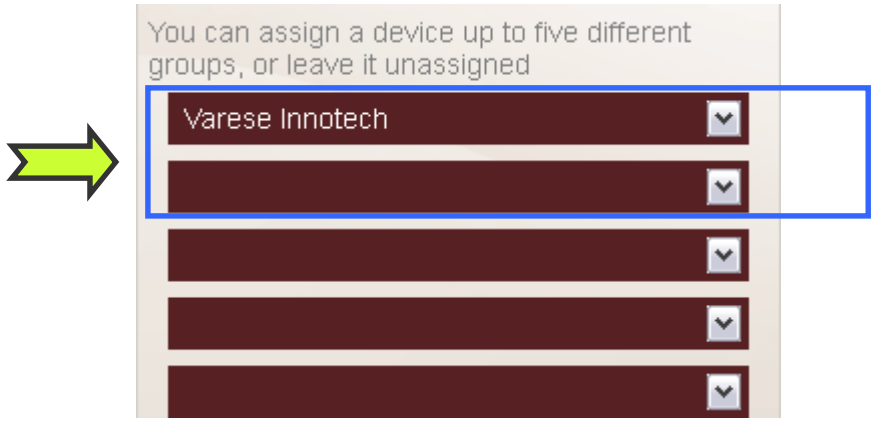


  – Click on the button Save

SETTINGS – 2. Loads, groups and panel boards

- **Assignment of Measure groups**
  1. Return to the section **"Gateways e Devices"** in **"System configuration"**
  2. In the **Devices** page ⇨ button Groups

     Is possible to assign each Device, previously created, to one or more Measure group(s)



  – Click on the button Save

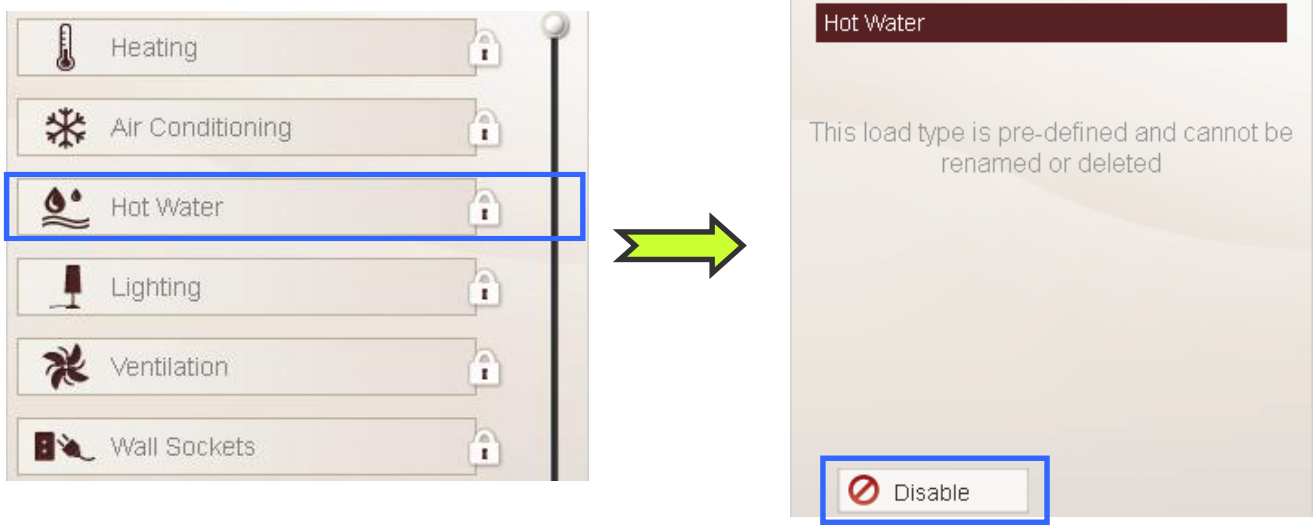
SETTINGS – 2. Loads, groups and panel boards

- **Description of System Functions**: Button

  - Page **"System configuration"** the button

allow to disable the selected load.

    Note: For the pre-defined loads (RT2012) is the only function permitted

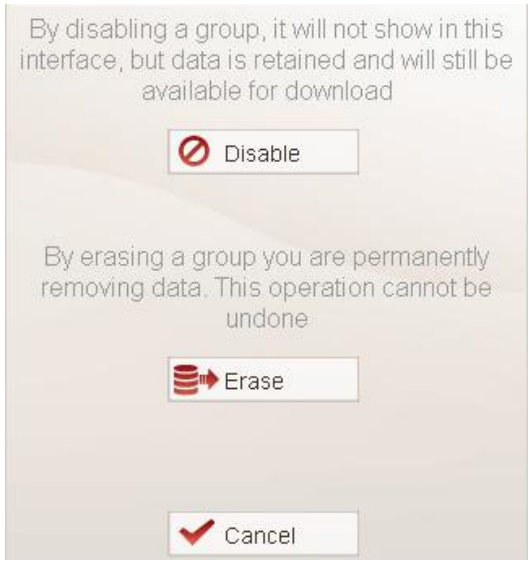


SETTINGS – 2. Loads, groups and panel boards

- **Description of System Functions**: Button

  - Page **"System Configuration"**, then page **"Measure groups"** or **"Panel boards"**
  - The button

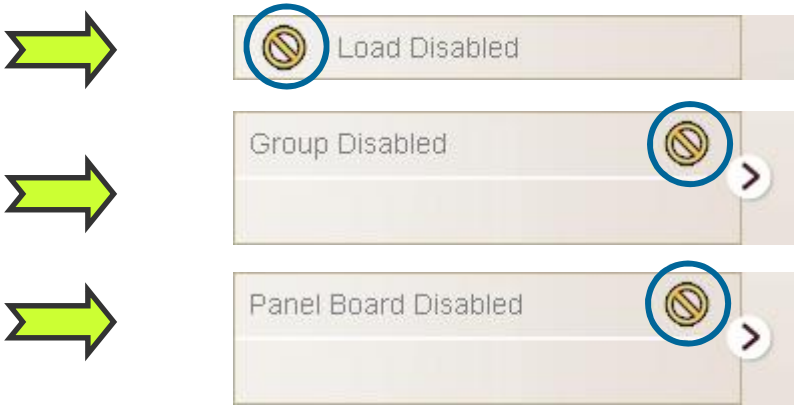
allows to enter to an intermediate page in which the deactivation (Disable) or the elimination (Erase) of a Group or of a Panel board is proposed


By disabling a group, it will not show in this interface, but data is retained and will still be available for download
Disable
By erasing a group you are permanently removing data. This operation cannot be undone
Erase
Cancel

SETTINGS – 2. Loads, groups and panel boards

- **Description of the operating indications**
  - Page **System configuration** then page **Loads, groups and Panel boards**
  - **Disabled** Status**:**

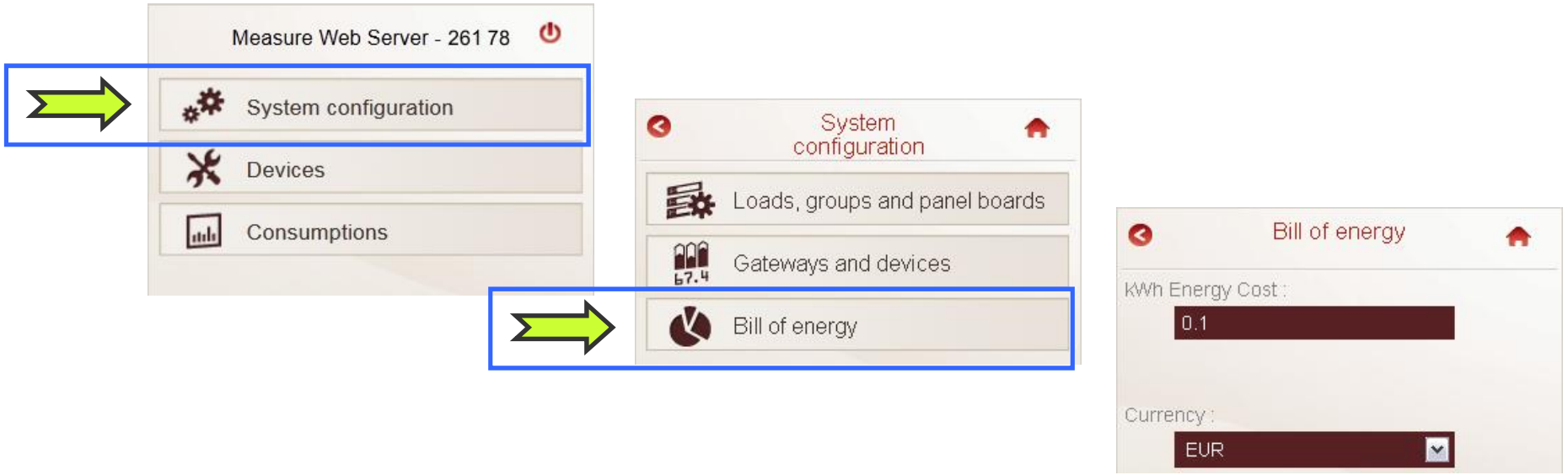
- Loads
- Groups
- Panel boards



SETTINGS – 3. Bill of energy

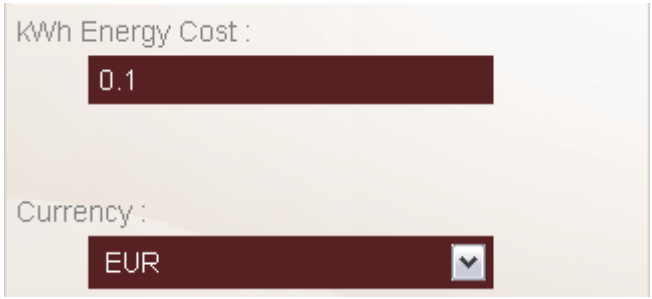
- Optional setting, allows the economic accounting of energy consumption

1. Click on **“System configuration”**
2. Click on **“Bill of energy”**



SETTINGS – 3. Bill of energy

- Assign the average **kWh energy price** and the **Currency**



- Click on the button

IMPORTANT: the cost of energy is approximate, usable for statistical purposes only

6. USE - Access

- The access to the web server data is protected, two identification codes are required (PIN code and PUK code)

- 3 types of “default” users
  - “**administrator**”
  - “**installer**”
  - “**user**”

  The home page ("home") will be different depending on the type of user

  It is possible to add other users

USE - “Default” Users

- “**administrator**”: access to the pages System Configuration, Devices and Consumptions **(the page “Web Server Configuration” is available only by accessing the Web server by a computer** ; refer to the version “PC+Tablet" of the manual **)**.
  - Default access codes:

    PIN : **99999**

    PUK : **00000 9999 00000**

    Home page:

USE - “Default” Users

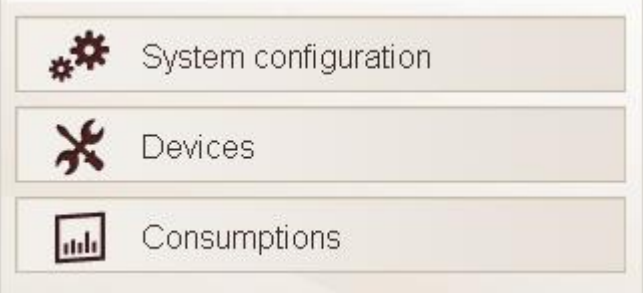
- “**installer**”: access to the pages System Configuration, Devices and Consumptions

  – Default access codes:

  PIN : **55555**

  PUK : **00000 5555 00000**

  Home page:



USE - “Default” Users

- “**user**”: limited access to display pages of data (not possible configuration in mode “user”)

  – Default access codes:

  PIN : **11111**

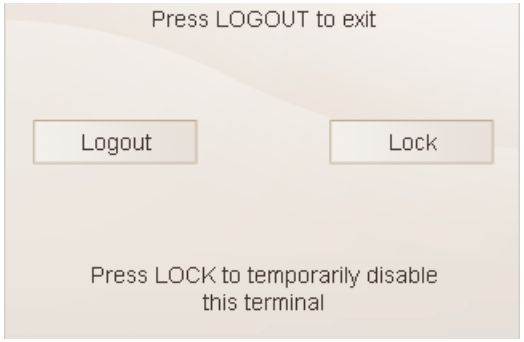
  PUK : **00000 1111 00000**

  Home page:

USE - Access

- **Terms of Web Server access, Login**
  - First access: enter the PIN code and the PUK code

- **Logout procedure**
  - Click on the button
  - Click on **Logout** or **Lock**
    - **Logout** : closing the session, reconnection with the PIN code
    - **Lock** : temporary disabling of the application, reconnection with the codes PIN+PUK



DISPLAY - Devices

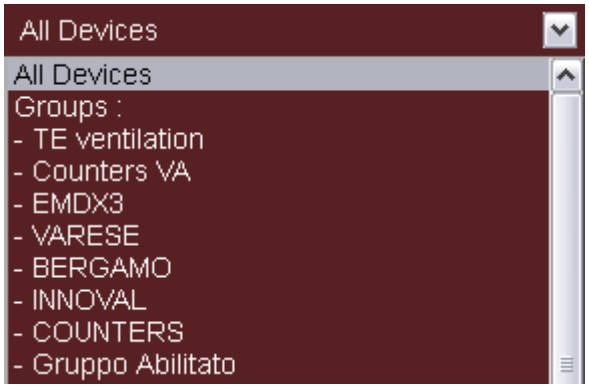
- Description of the display page of the "Devices" (for the installers)
  - Device Name
  - Modbus Address
    - (Modbus Address – Position, for the pulse counters)
  - Communication status (ON/OFF/ ⚠)

DISPLAY - Devices

Data visualization

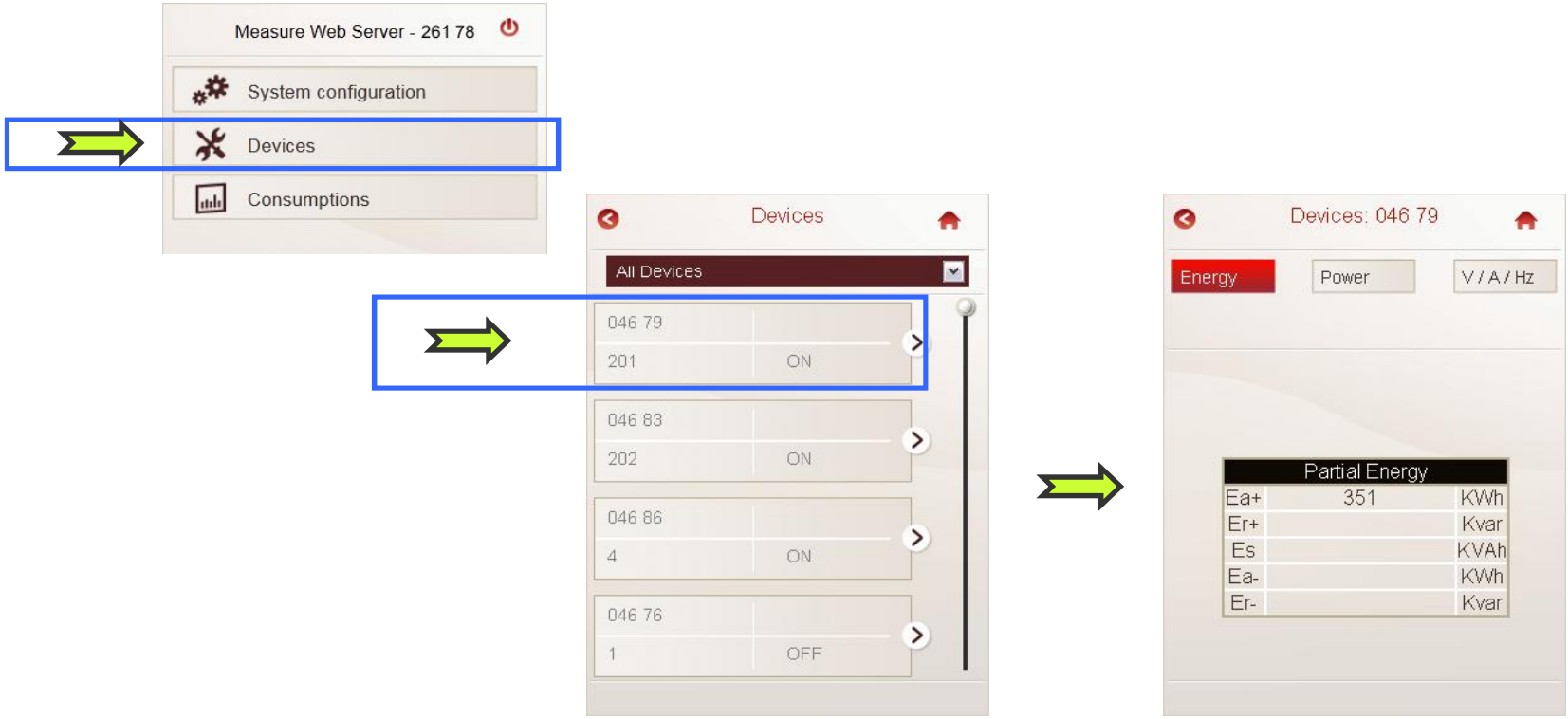
- Energy/Power/V/A/Hz
- THD/Harmonics (if available on the Device)

- Choice of the Device per Panel board or Gateway



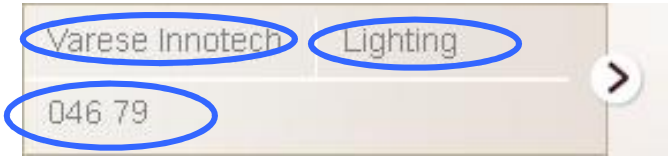
Measurement, Metering & Display via e•communicants

DISPLAY - Devices



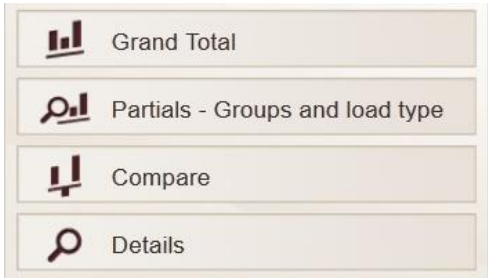
DISPLAY - Consumptions

- **Description of the display page of the "Consumptions"**
  (for energy managers)
  - Measure Group
  - Load type
  - Device Name



4 ways of displaying data

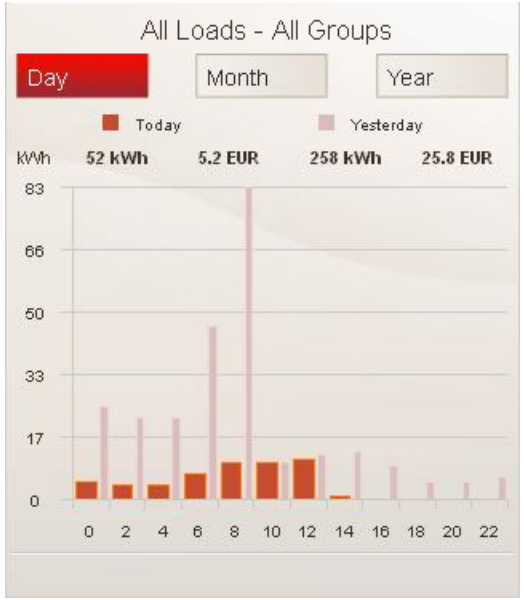
- **Grand Total** (Consumptions of the entire installation)
- **Partials** (Consumptions per Load and/or Measure group)
- **Compare** (Comparison of Global Consumptions between two Devices)
- **Details** (Consumptions of a single Device)



DISPLAY - Consumptions

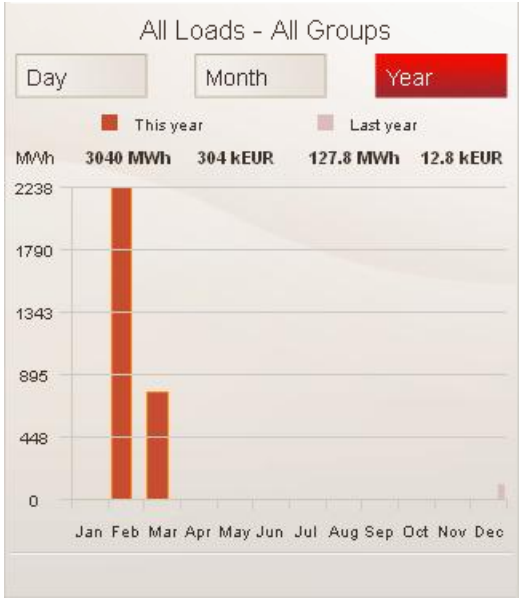
- Details of the visualization of the consumptions 3 histograms available

Day (per hours)



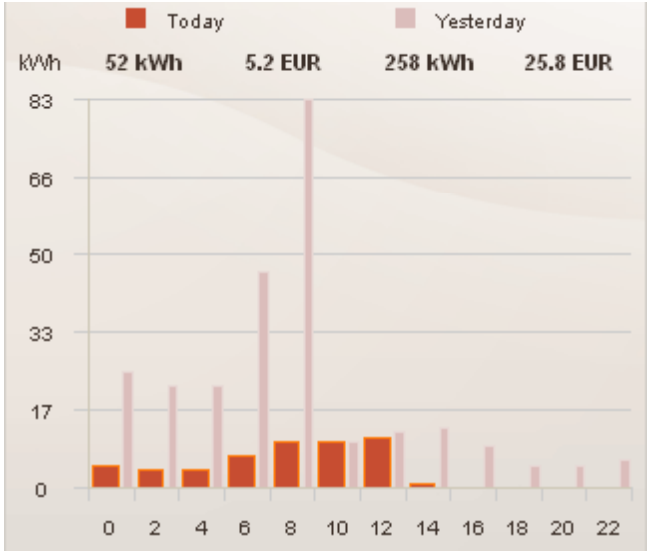
Month (per days)

Year (per months)



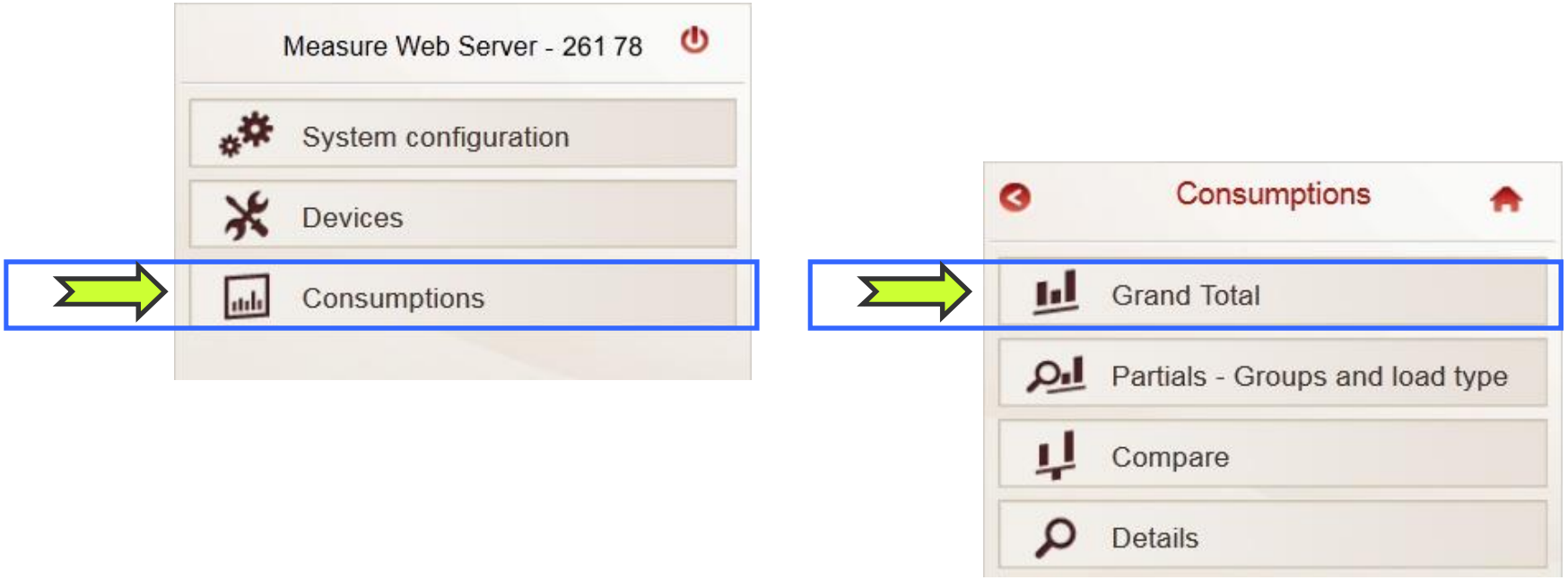
DISPLAY - Consumptions

- Comparison between the current and the previous value (ex. today/yesterday, etc.)



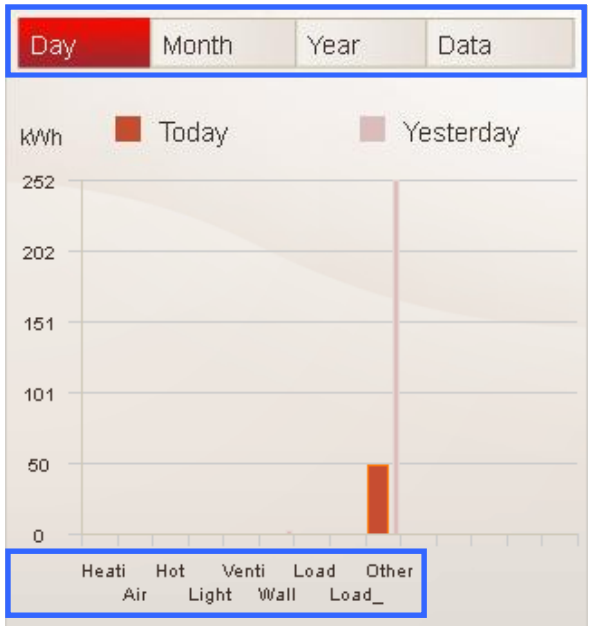
- Values in kWh and € (default)

DISPLAY - Total Consumption

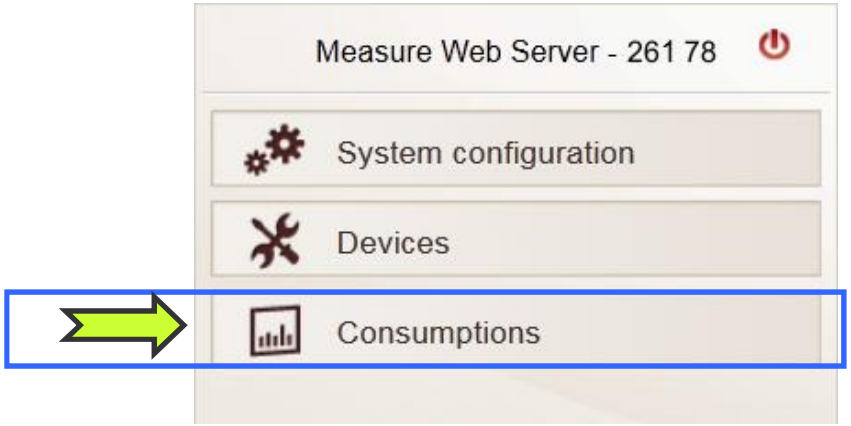


DISPLAY - Total Consumption

- Display page "Grand Total"
  - Visualization of Global Consumptions (Ea+) on histograms
    - Per Day/Month/Year/Data
    - Histogram per Load



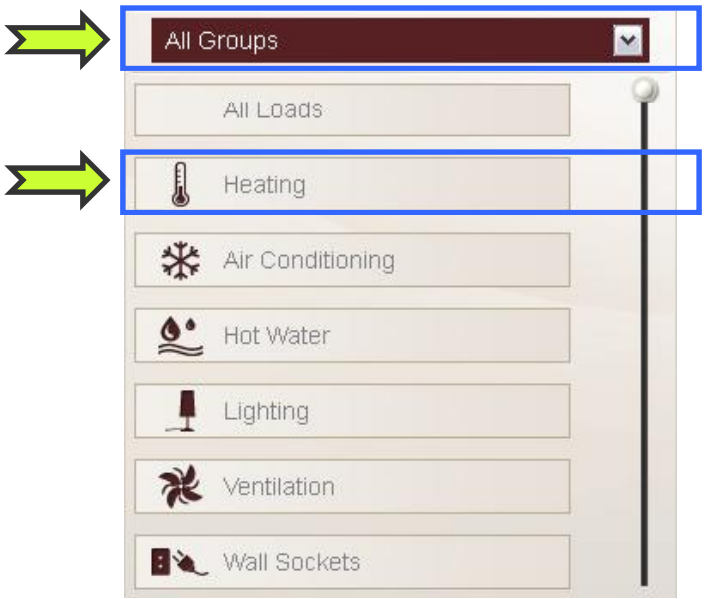
DISPLAY - Partial Consumption



DISPLAY - Partial Consumption

- Display page "Partial - Groups and Load type"
  - **1st page**: complete list of Loads Measure Groups.

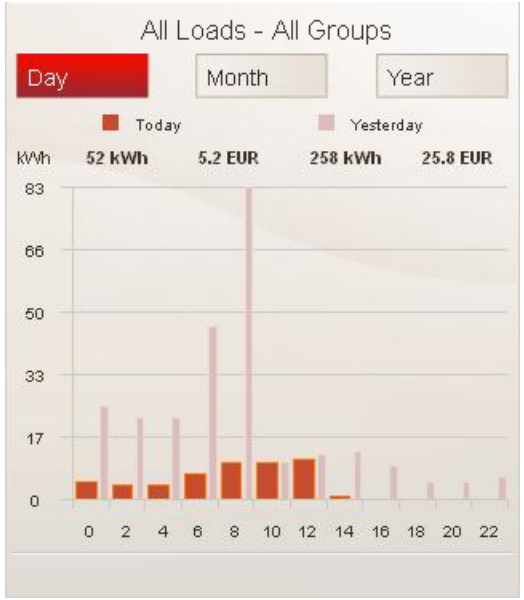
    - Selection of Groups
    - Selection of Loads



DISPLAY - Partial Consumption

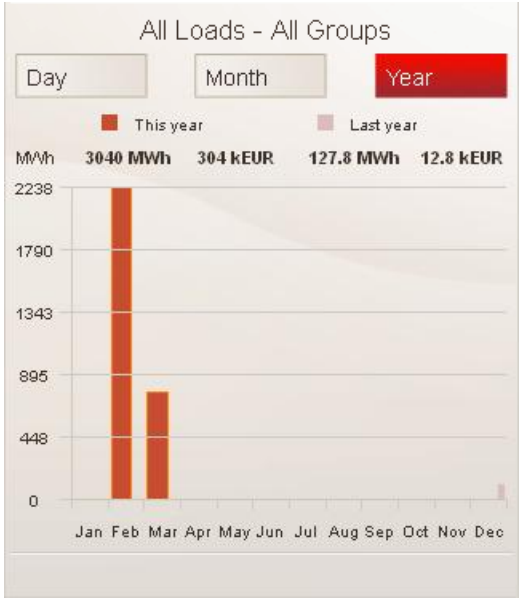
- Display page "Partial - Groups and Load type"
  - By selecting a Load leads to the **2nd page**: visualization of Partial Consumptions (Ea +) on histograms

Day (per hours)

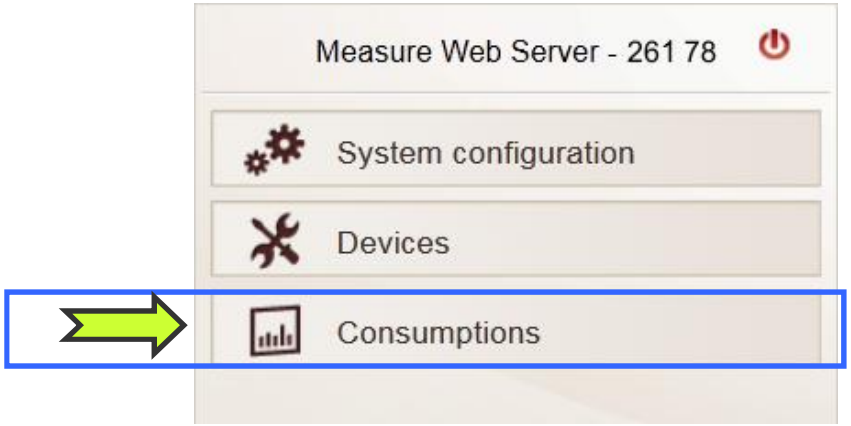


Month (per days)

Year (per months)



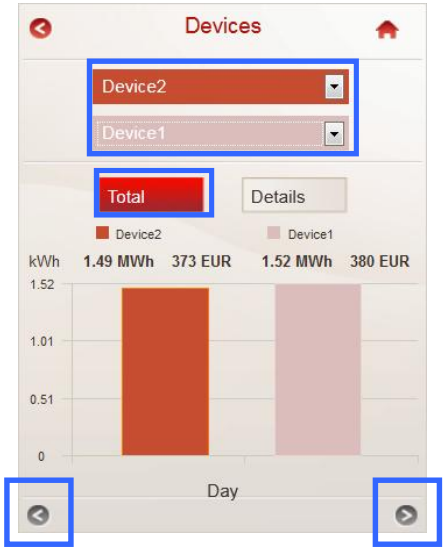
DISPLAY - Compare



DISPLAY - Compare

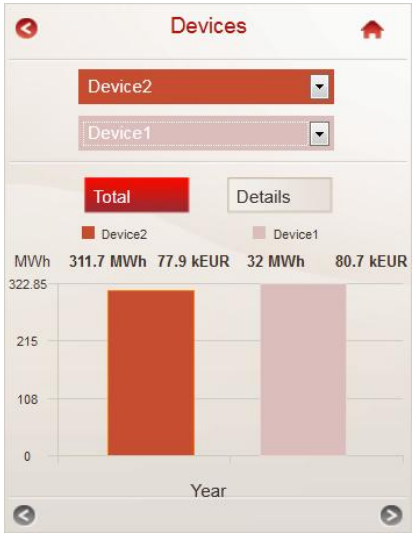
- Display page "Compare"
  - Comparison of the Global Consumptions between two Devices
    - Selection of the two Devices to be compared
    - Visualization of Global Consumptions (Ea+) on histograms per

Day



Month

Year

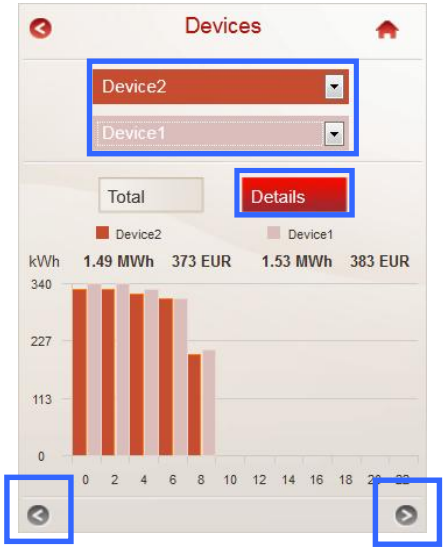


Press to change the page

DISPLAY - Compare

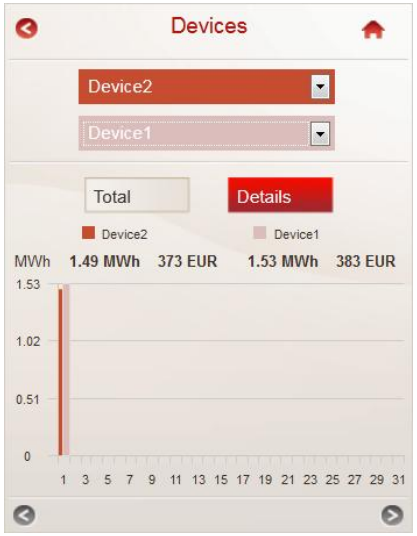
- Display page "Compare"
  - Detailed comparison of the Global Consumptions between two Devices
    - Selection of the two Devices to be compared
    - Visualization of Global Consumptions (Ea+) on detailed histograms per

Day (per hours)

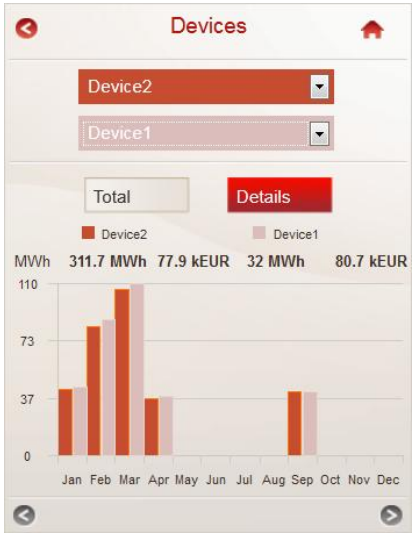


Press to change the page

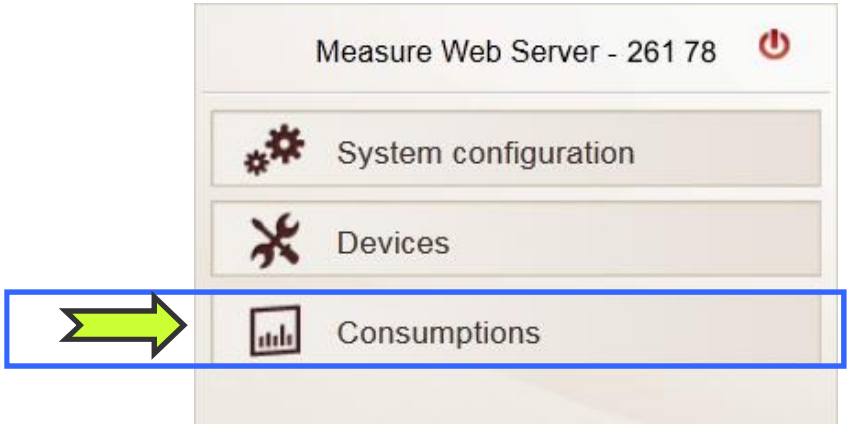
Month (per days)



Year (per months)

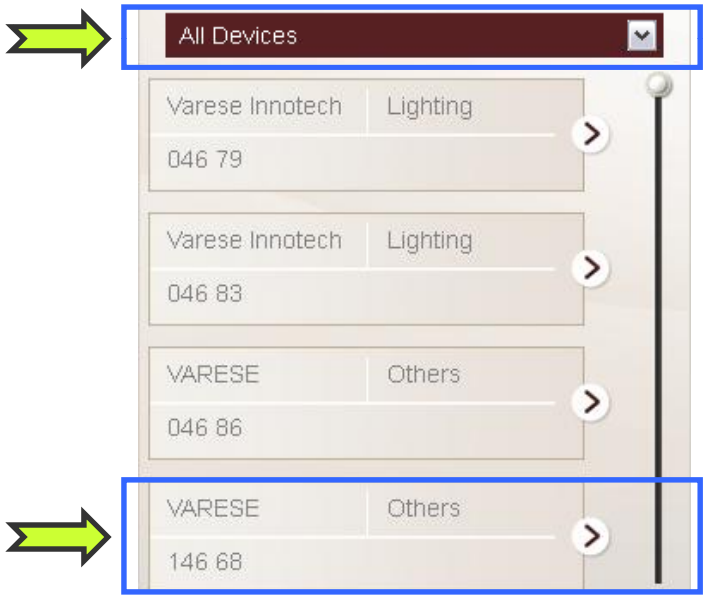


DISPLAY - Consumption Details



DISPLAY - Consumption Details

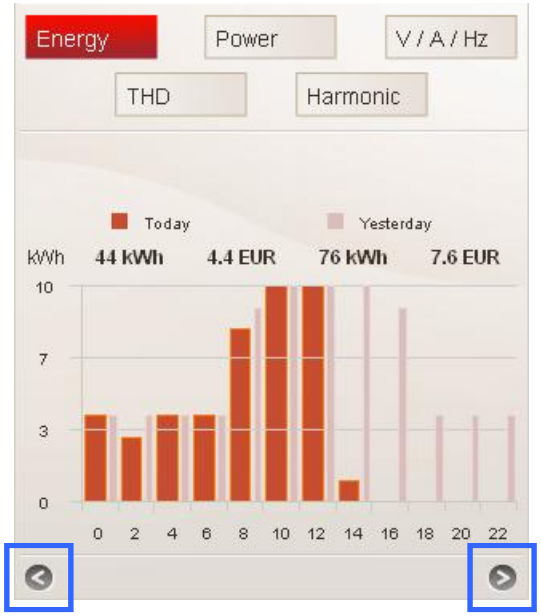
- Display page “Details”
  Display similar to the “Devices” page
  - **1st page**: complete list of Loads and Measure Groups.
    - Search per Groups/Loads or "All Devices“
    - Selection of Devices



DISPLAY - Consumption Details

- Display page "Details"
  - By selecting a Device leads to the **2nd page**: visualization of partial consumptions of energy (Ea +), Power, V/A/Hz/THD, Harmonics (if available) on histograms

Day (per hours)



Press to change the page

Month (per days)

Year (per months)

7. FAQ

- **Downloading and management of files .CSV and all other functions (management of the database, network types and terms of access) are possible only by accessing the Web server by a computer** (refer to the version “PC+Tablet" of the manual).